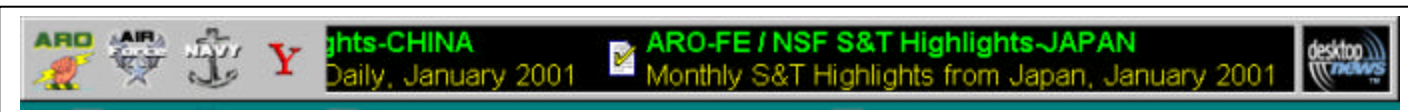




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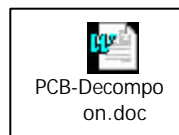
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Polychlorinated Biphenyl **PCB Chemical Decomposition Technology**

The Japanese Kanemi Oil Poisoning Incident in 1968 (Kanemi Yusho Jiken) led, in 1972, to restrictions of the production and new use of PCBs in Japan and eventually throughout the world as well. In EU and USA, PCBs generally have been decomposed by Incineration. In 1998, Japanese government changed the law to allow safer chemical decomposition of PCBs. Hence, many chemical decomposition technologies of PCBs were proposed and developed.

In the year 2000, the Japanese Government decided to accelerate the PCBs Decomposition and many companies started to construct and operate PCB decomposition plants. Sumitomo Denki Kogyo was the first (1999) to operated such a plant getting rid of the PCBs stored in its company. The process uses an OSD (Ontario Sodium Dispersion) method, which employs Na metal. Ebara decomposed 600kg PCBs in 2000, by using BCD (Base Catalyst Decomposition) process developed by them. Nihon Soda started PCBs treatment by SD (Sodium Dispersed) method in 2000. Mitsubishi Heavy Industries has been decomposing PCBs since January 2001, by using their own ‘Hot Water Dechlorination’ technology.

Tokyo Denryoku will construct three plants in Yokohama, Kawasaki and Chiba and will start operation this fall by using their own ‘DMI/NaOH’ technology. Mitsui & Company will enter PCBs decomposition business using Tokyo Denryoku technology. Toshiba will start PCBs treatment using their in-house developed ‘UV/Catalyst’ process in near future. Many other companies such as Kansai Denryoku, Shinko Pantec, Organo, Japan Railways and Tohoku University are very eagerly carrying research and development on PCBs decomposition technologies. Organo use Super Critical Water (SCW) oxidation, Japan Railways use UV/Biodegradation and Tohoku University use Mechano-chemical technology.



Click on the “Word” icon to access the chemical decomposition technology of PCBs in Japan. ARO-FE will provide more information on these technologies upon request

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